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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/623,604

07/22/2003

Shinichi Okamura

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06/28/2006

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EXAMINER

GABOR, OTILIA

ART UNIT

PAPER NUMBER

2884

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/623,604

Applicant(s)

OKAMURA ET AL.

Examiner

Otilia Gabor

Art Unit

2884

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>05/17/06</u> . | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/28/2006 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Enachescu et al. (U. S. Patent 6,840,666) and further in view of Nanri et al. (U. S. Patent 6,024,904).

Enachescu discloses an apparatus and method for finding disconnections and defects in the conductive wire pattern of an LCD panel 500 (thus glass plate), the apparatus comprising:

- a power source 330 for applying a voltage to the conductive wires on the panel;
- infrared image sensor 315, such as an infrared camera, for imaging thermal radiation from a surface of the conductive wire, thereby producing a temperature distribution image (see Figs.3, 5 and Col.3, lines 35-67, Col.4, lines 57-67).

In operation, to find disconnections and defects in the conductive wires of the LCD panel a voltage is applied to the panel to heat the conductive wires and the thermal radiation emanating from the surface of the conductive wires is imaged using an infrared camera while the conducting wires is heated and thereby producing a temperature distribution image.

Regarding claims 1, 8, 10, 11, 12, 19, 20, 22, 28 Enachescu fails to specifically disclose that the conducting wires are formed on a vehicular plate glass which wires provide antifogging, however, since Enachescu provides a device and method for

inspecting conductive wires regardless of what arrangement the wires are used in as long as they are part of a conductive wire pattern, it would have been obvious to use the Enachescu device and method on the antifogging conductive wire pattern of Nanri (used in the windshield of a car) to detect defects in the wire pattern, since 1) the conductive wires of Nanri are formed like any other integrated wire circuits, and in the alternative: 2) the recitation that "the conductive wire is formed on a vehicular plate glass used as a heating wire" has not been given any patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause (*Kropa v. Robie*, 88 USPQ 478 (CCPA)); 3) it has been held that to be entitled to weight in a method claims, the recited structure limitations therein must affect the method in a manipulative sense, and not to amount to the mere claiming of a use of a particular structure (*Ex parte Pfeiffer*, 1962 C.D. 408 (1961)); 4) it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations (*Ex parte Masham*, 2 USPQ 2d 1647 (1987)).

Regarding claim 2, 13, 22, 23-27 Enachescu discloses that the temperature distribution image is subjected to binarization by an image processor 320 (see Fig.10, 11, Col.9, line 41-Col.10, line 65), which binarization can be limited to either type or position or size of the defect (see Col.10, lines 23-65).

Regarding claims 3-7, 9, 14-18, 21 Enachescu discloses that in order to determine the position of the defects the temperature distribution image (test image) is superimposed on the image representing the pattern of the conductive wires (reference image), where the pattern image is done prior to the thermal imaging (reference images), and the faulty wires are found by subtracting the two images (see Col.7, line 21-Col.8, line 50, Figs.6C-12).

Response to Arguments

5. Applicant's arguments filed 04/28/2006 have been fully considered but they are not persuasive. The argument that the Enachescu method does not disclose that a determination of the disconnections of the conductive wires is done is not persuasive, because Enachescu clearly discloses that one of the defects that the system is detecting is the presence of short or open circuits in the system (see Col.8, lines 1-50). Open circuit means disconnection of circuit wires. Thus the argument is not persuasive. The other argument is that the limitation in the newly added claims, namely that the binarization is done only on the portion where the wires are present, is not present in Enachescu is not persuasive, because Enachescu allows for binarization based on type, location and size of the defects or possible defects (see Col.10, lines 23-65 and the rejection above).

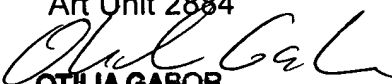
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Otilia Gabor whose telephone number is 571-272-2435. The examiner can normally be reached on Monday-Friday between 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Otilia Gabor
Primary Examiner
Art Unit 2884


OTILIA GABOR
PRIMARY EXAMINER